

# SELF-EXCITED DC-TO-DC CONVERTER AND POWER SUPPLY DEVICE THEREFOR

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## Abstract of JP2000004579

**PROBLEM TO BE SOLVED:** To provide a small-sized and low-loss self-excited DC/DC converter and its power supply device which can be used, even when the voltage fluctuation of an input power supply is large. **SOLUTION:** A series circuit consisting of a PNP transistor Q1, a primary winding L1 and a capacitor C2 is connected between input terminals t1 and t2. A diode D1 is connected in parallel with the primary winding L1 and the capacitor C2. A feedback winding L2 is coupled magnetically with the primary winding L1 and connected between the base and the emitter of the transistor Q1 via a capacitor C1 and a resistor R3. The emitter and the collector of a PNP transistor Q2 are connected to the emitter and the base of the transistor Q1 respectively, to bypass a part of the base current of the transistor Q1. The bypassed current value is changed, in accordance with the output voltage of the transistor Q2 to control the turning on/off of the transistor Q1 so as to control the output voltage to be constant.





